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ABSTRACT

As part of a symposium on challenges and problems of adult education researchers in different settings, recent research activities at one private independent research organization were examined. Three projects of the American Institutes for Research (AIR) were reviewed, all relating to adult development and aging. The first examined career guidance for adults with an emphasis on women and minorities. It resulted in a catalog describing successful programs throughout the country and in a planning manual for such programs. The second, involving a series of studies to define and assess Quality of Life, indicated that learning and intellectual development is an important dimension of Quality of Life and that adult education can play an important role in the lives of older adults. The third, on adult basic education needs, participation and persistence, was conducted as part of the Statistical Analysis Group in Education (SAGE) created by the National Center for Education Statistics. It was concluded that private research organizations provide the researcher with a great deal of flexibility for setting objectives and that research designs used in applied situations may be less rigorous than those used in basic research, with a trade off occurring between internal and external validity. Major limitations are lack of training for work in a private institution and the lack of security in research support. A major advantage is that multidisciplinary efforts and colleague interaction and collaboration are the norm. (JT)

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Adult Education and Aging:
Perspectives on Research at a
Private Independent Research Organization¹

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Abstract

This paper provided a description of the research activities focused on adult education, undertaken at the American Institutes for Research (AIR). Three specific projects were discussed. The first examined career guidance for adults, with an emphasis on women and minorities. It resulted in a catalog describing successful programs throughout the country and in a planning manual for such programs. The second project involved a series of studies to define and to assess Quality of Life. These studies indicated that learning and intellectual development is an important dimension of Quality of Life and that adult education can serve an important role in the lives of older adults. The third project was conducted as part of the Statistical Analysis Group in Education, created by the National Center for Education Statistics. It involved analyses of data from the Participation in Adult Education Survey directed toward issues of needs, participation, and persistence in adult basic education. The paper concluded with an examination of particular aspects of research characteristic of the work at a private research organization like AIR.

Research on adult education is currently being conducted in many different kinds of settings. This symposium includes researchers affiliated with the federal government, the state government, private industry, a university, and a research organization. A review and comparison of the perspectives emerging from these various settings will provide not only an overview of current research efforts but will also serve to indicate challenges and problems facing researchers. That is the purpose of the present symposium.

My role in this endeavor is to provide a description of the research activities conducted at a private independent research organization. To present such an overview, this paper will be divided into two major sections. The first section will describe the research activities undertaken at one specific research organization, the American Institutes for Research (AIR). The second section of the paper will examine four specific aspects of research as they relate to work at a private research organization.

Review of AIR Research Efforts

AIR is an independent nonprofit institution established in 1946. Research, development, and evaluation services are provided to federal, state, and local government agencies; to foundations and public service associations; and to industrial clients. Major offices have been established in Washington, D.C., Palo Alto, California; and Cambridge, Massachusetts; and support offices are established as necessary throughout the United States and abroad. AIR employs a full-time permanent staff of 350 research and support staff. The staff are engaged in a variety of research activities focusing on education and guidance, health and mental health, international development, productivity and human performance, law enforcement and criminal justice, and population studies.

For several years, researchers at AIR have focused efforts on educational issues as related to adult development and aging. Three recent projects indicate the breadth of the research interest here. These include (1) the development, implementation, and evaluation of career guidance for adults with a focus on ethnic minorities and women, (2) the identification of opportunities for improving the quality of life of older adults, and (3) the

identification and analysis of issues in adult education as part of the Statistical Analysis Group in Education (SAGE). Each of these will now be described briefly.

Career guidance for adults. In this first project, AIR worked as a subcontractor on a grant from the U.S. Office of Education to the San Jose Unified School District (DHEW/USOE Grant #OEG-O-74-1722). The AIR researchers surveyed individuals and organizations throughout the country to determine the kinds of career planning programs being provided to adults. Table 1 lists the sources that were surveyed in an effort to locate programs. The search yielded a total of 752 programs, and these were sent a form to obtain information on the purpose, target population, staffing, materials, costs, evaluation, and major features of the program. Of the 460 programs that responded, 93 felt that they did not qualify, resulting in a total sample of 367. Using the information from the survey form and from other materials sent by these programs, a subset of 79 programs were selected that appeared to be successful in working with minority groups and with women. A catalog describing the 79 programs was prepared along with a planning manual that outlined activities recommended for improving or initiating an adult guidance program (Harrison, 1976).

From the program descriptions, a community task force selected two programs for implementation in the San Jose area. (The task force consisted of staff of the Metropolitan Adult Education Program, representatives of organizations in the community working with ethnic minorities and women in career development, and individuals representing minorities and women.) For each program, a kit of materials and of the evaluation instruments was prepared. The evaluation of the program designed for ethnic minorities revealed that the program was successful in helping persons meet the program objectives but it attracted very few individuals. The evaluation of the program for women revealed that the program was highly successful. [See Bellenger, Beck, Harrison, and Sanderson (1976) for further details on the program.]

The quality of life of older adults. AIR researchers have engaged in a series of studies focusing on the definition and assessment of quality of life. A major purpose of this effort was to develop and refine a criterion

TABLE 1
Individuals, Groups, and Sources Surveyed

Director, Division of Adult Education, Bureau of Adult and Occupational Education, U.S. Office of Education

Director, Manpower Research Program, U.S. Department of Labor

Assistant Secretary for Indian Affairs, Bureau of Indian Affairs, U.S. Department of the Interior

Director, Women's Bureau, U.S. Department of Labor

Division of Adult Education, National Institute for Education

Director of Research, Office of Economic Opportunity

Director of Counseling and Training Programs, Department of Defense

Chief State School Officers

Superintendents of Public Instruction for U.S. Cities over 100,000 in population

Manpower Training Skills Center and Area Manpower Institutions for the Development of Staff

Regional Educational Laboratories and Research and Development Centers

Presidents of National and Regional Education Associations

Members of the National University Extension Association

Member Institutions of the Association of University Evening Colleges

California State College and University Deans of Continuing Education

Heads of Social Service Agencies

State Directors of Adult Education

State Junior College Administrators

State Associates of the National Association for Public Continuing Adult Education

Directors of State Education Associations

State Vocational Research Coordinators

measure for evaluating the success of various types of social policies, programs, and institutions. The studies were funded by Internal AIR funds and by grants from the National Institute of Education (NIE-G-00-3-0148) and from the Administration on Aging (AOA-90-A-514). The first step in these studies was to obtain a comprehensive set of dimensions or categories that includes all of the behaviors and experiences that have a significant effect on the quality of life of Americans. Various committees and investigators confronted with this problem have prepared lists of the things that seemed important to them. Of course, each of the lists differs in some respects depending on the experiences and impressions of those compiling them. (See Goals for Americans, 1960; the work of the Organization for Economic Cooperation and Development, 1973; Campbell, Converse, and Rodgers, 1976.)

In contrast to these efforts, Flanagan and Russ-Eft (1975) have provided an objective, empirically-developed set of fifteen dimensions of quality of life. Definition of these dimensions was based on the reports of critical behaviors and experiences that individuals observed to be direct contributors, either positively or negatively, to their own quality of life. (The Critical Incident Technique is described in detail in Flanagan, 1954.) The critical incidents were collected from a wide variety of people of all ages located in diverse kinds of communities all over the United States. Altogether 6,571 critical incidents were collected from 2,834 people.

A wide variety of questions were used to collect these critical incidents. Some of the questions were the following:

1. Think of the last time you did something very important to you or had an experience that was especially satisfying to you. What did you do or what happened that was so satisfying to you?
2. Think of a recent time you could NOT do something you very much wanted to do or could NOT have something you very much wanted to have.
3. Think of a time that you did something or something happened to help you move ahead with your long-range plans.
4. Think of a time you saw something happen to another person that really was harmful or made his/her life worse in some way.

5. What has given you the most satisfaction in the past year?
6. Think of the biggest change in the quality of your life which has occurred in the past five years.

The critical incidents resulting from the above questions were sorted into categories of similar behaviors and experiences and through a process of gradual refinement a set of 15 categories was formulated. These were distributed among five major headings. The results are shown in Figure 1.

It should be emphasized that the categories represent a comprehensive formulation of direct observations of the things people did or experienced that made a difference in their quality of life. The definition of quality of life in terms of these 15 objectives makes measurement and research in this area more comprehensive, objective, and feasible.

Using the results of the definitional study, Flanagan and Russ-Eft (1975, 1978) conducted interview surveys with nationally representative samples of persons aged 30, 50, and 70 years old. The 1000 30-year-olds were selected as a stratified random probability sample from among the Project TALENT participants. Project TALENT consists of a stratified random sample of approximately 4.5% of all students enrolled in school in 1960. In 10% of the schools, Project TALENT participants also included a special sample of all 15-year-olds who were enrolled in grades 1-8 in 1960 or who had already left school. For a representative sample of all 15-year-olds in 1960 (and 30-year-olds in 1975), both the regular TALENT files and the special sample files were used. To obtain representative samples of older Americans, the sampling plan provided for the selection of four 500-case probability samples: (1) 48- to 52-year-old men, (2) 48- to 52-year-old women, (3) 68- to 72-year-old men, and (4) 69- to 72-year-old women. The sampling plan provided for a multistage cluster probability sample. A three-stage cluster sampling procedure was used in the Census-defined Standard Metropolitan Statistical Areas (SMSAs), with stratification in the first stage according to geographic location and population density. In non-SMSAs, a two-stage cluster sampling procedure was employed with stratification in the first stage according to geographic location and population density.

Figure 1

Components Comprising Quality of Life

PHYSICAL AND MATERIAL WELL-BEING

A. Material well-being and financial security

Having good food, home, possessions, comforts, and expectations of these for the future. Money and financial security are typically important factors. For most people filling these needs is primarily related to their efforts or those of their spouse.

B. Health and personal safety

Enjoying freedom from sickness, possessing physical and mental fitness, avoiding accidents and other health hazards. Problems related to alcohol, drugs, death, and aging are also included. Effective treatment of health problems is a large component.

RELATIONS WITH OTHER PEOPLE

C. Relations with spouse (girlfriend or boyfriend)

Being married or having a girlfriend or boyfriend. The relationship involves love, companionship, sexual satisfaction, understanding, communication, appreciation, devotion, and contentment.

D. Having and raising children

Having children and becoming a parent. This relationship involves watching their development, spending time with them and enjoying them. Also included are things like molding, guiding, helping, appreciating, and learning from them and with them.

E. Relations with parents, siblings, or other relatives

Having parents, siblings, or other relatives. In these relationships one experiences communicating with or doing things with them, visiting, enjoying, sharing, understanding, being helped by and helping them. The feeling of belonging and having someone to discuss things with is a large component.

F. Relations with friends

Having close friends. In these relationships one shares activities, interests and views. Important aspects of these relationships involve being accepted, visiting, giving and receiving help, love, trust, support, and guidance.

SOCIAL, COMMUNITY, AND CIVIC ACTIVITIES

G. Activities related to helping or encouraging other people

Helping or encouraging adults or children (other than relatives or close friends). This can be done through one's efforts as an individual or as a member of some organization, such as a church, club, or volunteer group, that works for the benefit of other people.

H. Activities relating to local and national governments

Keeping informed through the media; participating by voting and other communications; having and appreciating one's political, social, and religious freedom. One component of this includes having living conditions affected by regulation, laws, procedures, and policies of governing agencies and the individuals and groups that influence and operate them.

PERSONAL DEVELOPMENT AND FULFILLMENT

I. Intellectual development

Learning, attending school, acquiring desired knowledge and mental abilities, graduating, and problem solving. Other aspects involve improving understanding, comprehension or appreciation in an intellectual area through activities in or out of school.

J. Personal understanding and maturity

Developing and gaining orientation, purpose, and guiding principles for one's life. This may involve becoming more mature, gaining insight into and acceptance of one's assets and limitations, experiencing and awareness of personal growth and development, and realizing the ability to influence the course of one's life significantly. It also includes making decisions and planning life activities and roles. For some people, a major component arises from religious or spiritual experiences or activities.

K. Occupational role (job)

Having interesting, challenging, rewarding, worthwhile work in a job or home. This includes doing well, using one's abilities, learning and producing, obtaining recognition, and accomplishing on the job.

L. Creativity and personal expression

Showing ingenuity, originality, imagination in music, art, writing, handicrafts, drama, photography, practical or scientific matters or everyday activities. This also includes expressing oneself through a collection, a personal project, or an accomplishment or achievement.

RECREATION

M. Socializing

Entertaining at home or elsewhere, attending parties or other social gatherings, meeting new people, interacting with others. It may include participation in socializing organizations and clubs.

N. Passive and observational recreational activities

Participating in various kinds of passive recreation, such as watching television, listening to music, reading, going to the movies, and going to entertainment or sports events. It also involves appreciating the art and beauty in many aspects of life.

O. Active and participatory recreational activities

Participating in various kinds of active recreation, such as sports, hunting, fishing, boating, camping, vacation travel, and sightseeing, etc. This may also involve playing sedentary or active games, singing, playing an instrument, dancing, acting, etc.

A personal interview, lasting three to four hours, was conducted with each member of the sample. These interviews dealt with all aspects of current quality of life and, for the 50- and 70-year-olds, gathered retrospective information about earlier periods in their lives. Although data exist on all 15 dimensions of quality of life, this discussion will focus on the results relating to education and the dimension of learning and intellectual development.

The first major difference among the three age groups involves the amount of education received by members of the sample. About 85% of the 30-year-olds obtained a high school diploma or equivalent as compared with about 70% of the 50-year-olds and only 45% of the 70-year-olds. The age and education level of the sample members appears to be related to the ratings of importance and of needs met given to the dimension of learning and intellectual development. Thus, about 85% of the 30-year-olds rate the dimension as important or very important as compared with 68% of the 50-year-olds and 55% of the 70-year-olds. In terms of needs met, we find that about 49% of the 30-year-olds indicate that their needs are well or very well met as compared with 60% of the 50-year-olds and 68% of the 70-year-olds. Such results suggest that adult education may not be needed by older adults, but, in fact, adult education can serve an important role in the lives of many older adults. For example, we find that among the 50-year-olds, 58% who stated that their needs in learning and intellectual development were "well" or "very well" met had taken an adult education course while 40% who stated that their needs in that dimension were "only slightly" or "not at all" well met had taken a course. Similarly, among the 70-year-olds, 36% whose needs were "well" or "very well" met had taken a course as compared with 18% whose needs were "only slightly" or "not at all" well met. Table 2 presents a listing of the kinds of courses taken by these people, and Table 3 provides an indication of the kinds of courses that these older men and women would like to take.

In addition to this statistical presentation, we can examine the lives of individuals to see the ways in which adult education could improve or has improved the person's quality of life.

TABLE 2
Type of Course Taken
(Males and Females at Ages 50 and 70)

Course	50-Year-Olds		70-Year-Olds	
	Males	Females	Males	Females
1) Industrial Arts	24%	3%	27%	3%
2) Fine Arts	8%	15%	11%	16%
3) Business Education and Economics	14%	12%	8%	9%
4) Home Arts	1%	17%	0%	22%
5) Social Studies and Social Sciences	10%	11%	3%	8%
6) Self Expression and Personal Development	4%	11%	1%	10%
7) English and Language Arts	6%	5%	9%	5%
8) Health and Safety	4%	8%	6%	6%
9) Religion	1%	6%	6%	10%
10) Physical Science, Math, and Computers	6%	3%	8%	1%
11) Foreign Languages	2%	3%	2%	4%
12) Physical Education and Games	4%	2%	1%	2%
13) Real Estate	4%	2%	4%	1%
14) Gardening and Farming	2%	0%	4%	1%
15) Law	2%	0%	2%	0%
16) Career Education and Pre-Retirement	1%	1%	2%	1%
17) Other (Driver's Education, Social Work, Housing/Urban Development, Volunteerism, Animal Training)	6%	2%	7%	2%

TABLE 2
Courses Planned for Future
(Males and Females at Ages 50 and 70)

Course	50-Year-Olds		70-Year-Olds	
	Males	Females	Males	Females
1) Fine Arts	10%	13%	14%	18%
2) Industrial Arts	29%	4%	16%	1%
3) Social Studies and Social Sciences	10%	14%	12%	12%
4) Home Arts	0%	13%	1%	17%
5) Business Education and Economics	9%	11%	5%	2%
6) English and Language Arts	4%	9%	6%	10%
7) Physical Science, Math, and Computers	10%	6%	10%	3%
8) Religion	4%	3%	9%	11%
9) Health and Safety	3%	9%	3%	4%
10) Self Expression and Personal Development	4%	6%	4%	6%
11) Foreign Languages	2%	5%	3%	8%
12) Gardening and Farming	4%	2%	9%	5%
13) Physical Education and Games	3%	2%	3%	2%
14) Law	2%	1%	1%	0%
15) Real Estate	2%	1%	1%	1%
16) Career Education and Pre-Retirement	1%	0%	1%	0%
17) Other (Driver's Education, Social Work, Housing/Urban Development, Volunteerism, Animal Training)	3%	2%	2%	0%

Alan Pruitt (fictitious name) is a 71-year-old white male living in a West Coast state. His parents were migrant workers who followed the sugarbeet crop, and he was forced to repeat many grades while in school. At the age of 19, he was in the third grade. "Social pressure" finally led him to quit after the third grade. Learning is moderately important to Alan who says, "With my background of schooling I couldn't get far in attending school now. I'm not a smart man, but I'm not stupid...I don't want my mind to go stale. I want to keep it active. So I read a lot. I've learned everything by myself. Didn't need no school." His lack of education contributes negatively to several aspects in his current quality of life. Learning and developing his mind have always been important to him; however, he feels that because he lacks an adequate educational base his needs in this area are interfered with. This lack of education also appears as an interfering factor in his needs being better met in creativity and understanding himself.

The following, on the other hand, is a case in which adult education has led to a great improvement in an individual's quality of life.

Eva Sanchez (fictitious name) is a 71-year-old Chicano female living in a West coast state. Eva has only a third grade education. However, learning is very important to her, because through it she is able to improve her English. Since she was married at age 15 and then had six children, she never had time for schooling. Now, she has the time, and she attends an English class one day and one night a week. She states "It's important to communicate the good things of life. My kids never spoke English at home before. I speak English to my grandchildren." Eva says that going to school and learning more and making new friends have made the biggest improvement in her quality of life. She now speaks better English, understands more, and has a "new world."

Issues in Adult Basic Education and Other Adult education

The National Center for Education Statistics (NCES) has created the Statistical Analysis Group in Education (SAGE) in order to fulfill its mandate to produce policy-relevant analyses of education survey data. SAGE serves as a resource for the Center, both in the short-term solution of specific analytical problems and in the long-range development of the Center's analytical capabilities. SAGE brings together experts in statistical survey methodology, data-base structuring, social indicator development, and design of policy-oriented data analyses. Using these skills, the Center aims to enhance its application of existing data to policy issues, to identify needs for important additional data, and to provide a powerful stimulus to improving the basic data reports.

Administered by the Center's Division of Multilevel Educational Statistics, SAGE is currently comprised of staff of the American Institutes for Research and AUI Policy Research.

The SAGE staff members are working with the NCES staff on a variety of tasks in the areas of elementary and secondary education and postsecondary education. One of the tasks is concerned with analyses directed toward issues in adult basic education (ABE). For this effort, SAGE staff members began by conducting a comprehensive review of studies on ABE and other adult education and by identifying major issues. (A book by Russ-Eft, Rubin, and Holmen, to be released in the near future by Garland Publishing Company, provides a review of these issues and an extensive annotated bibliography.) Based on these issues, the staff is currently conducting a variety of analyses of the national data base called the Participation in Adult Education survey (PAE). The PAE survey is conducted every three years as a supplement to the May Current Population Survey of the Census Bureau, and survey results exist for the years 1969, 1972, 1975, and 1978. Some of the results of these surveys may be found in reports published by NCES (Okes, 1974 and 1976; and Boaz, 1978 and in preparation).

Some important issues concerning adult basic education (ABE) involve questions of needs, participation, and persistence in ABE. To examine these questions, definitions were developed for the ABE target and demand populations. The target population consists of those persons who should be served by ABE programs, while the demand population is comprised of persons actually participating in ABE programs.

We can begin by investigating the effect of age on participation in adult education by those defined as members of the target population. Table 4 presents the results of a log-linear (or multiple-contingency table analysis) using the variables of age (A) and highest grade completed (H). The analysis reveals that the two variables and their interaction are significant. Figure 1 displays these results. Thus we find (1) decreasing participation with an increase in age and (2) increasing participation with an increase in the highest grade completed. The interaction results from the fact that for persons who have not completed the eighth

TABLE 4
Analysis of the Effects of Age (A) and Highest Grade
Completed (H) on Participation (P)

Model	Marginals	L.R. Chi-Square	df	p	"R2"	F
1	P, HA	585.73	31	.000		18.89
2	PH, HA	283.07	24	.000	.52	11.79
3	PA, HA	143.85	28	.000	.75	5.14
4	PA, PH, HA	59.88	21	.000	.90	2.85

Analysis of Hypotheses

Hypothesis	L.R. Chi-Square	df	p	"R2"	F
Independence of P from H and A (model 1)	585.73	31	.000		18.89
H main effect, alone (model 2 minus model 1)	302.66	7	.000	.52	43.24
A main effect, alone (model 3 minus model 1)	441.88	3	.000	.75	147.29
H Main effect, given A main effect (model 4 minus model 3)	83.97	7	.000	.59	12.00
A main effect, given H main effect (model 4 minus model 2)	223.19	3	.000	.79	74.40
Interaction between H and A (model 4) (note: restriction to hierarchical models makes this hypothesis include H and A main effects as well)	59.88	21	.000		2.85

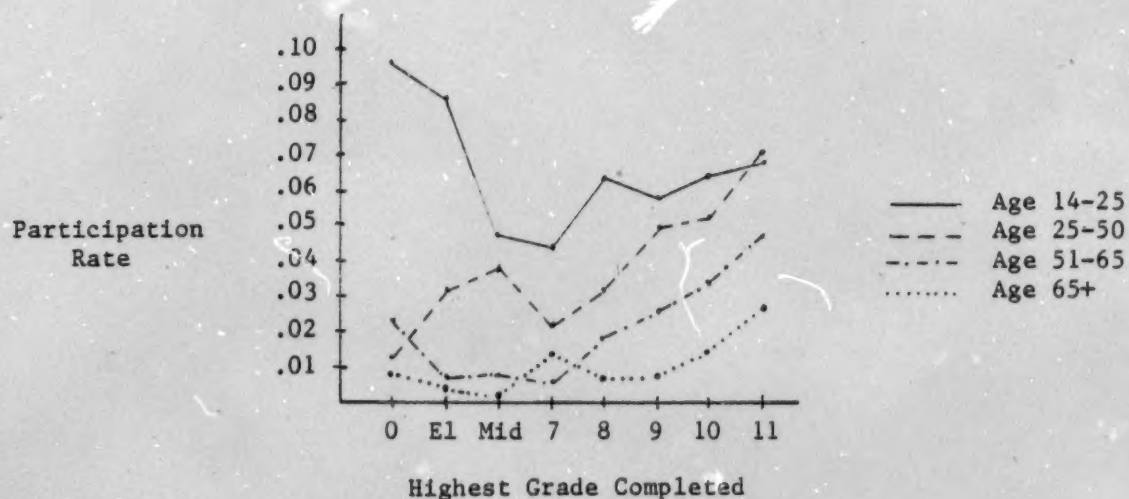
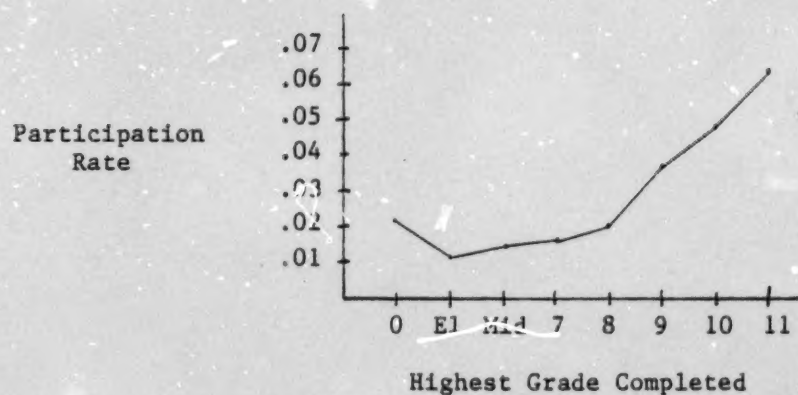
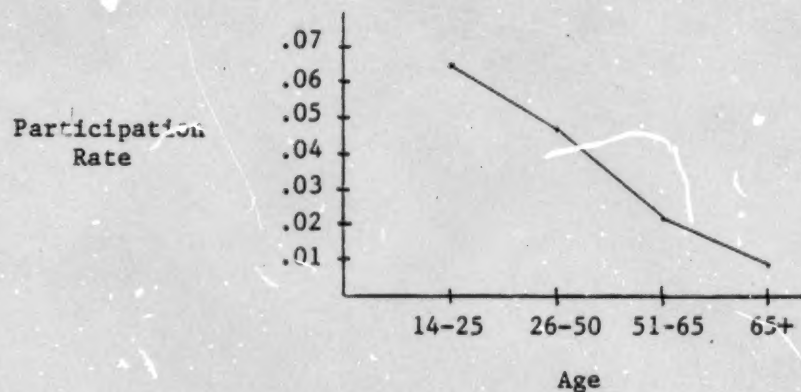


Figure 1. Display of effect of age, highest grade completed, and their interaction on participation in adult education.

grade, there is a decrease in participation as highest grade increases for the youngest age group, and no trend in participation for the other three age groups; while for persons who have completed the eighth grade, there is a simple monotonic increase in participation, for all age groups, as grade increases.

This situation can be further confirmed by comparing the participation among various age groups. Table 5 presents the age distribution of the United States population according to the 1970 Census. These figures are compared with the ABE target and demand populations for 1969 and 1972. As is shown in this table, the ABE target population contains a large percentage of adults over the age of 60. This is especially true for Definition 1, which is comprised of those with less than an eighth grade education. For example, 41.3% of the ABE target population in 1969 were 60 years of age and older. On the other hand, the figures for the demand population show that there is less participation among the older adults. Using Definition 1 for 1969, we see that only 14.1% of those actually participating in adult basic education were 60 years and older.

Such results imply that ABE programs should be directed toward serving older Americans. This age cohort comprises a large portion of the target population; unfortunately, many of these people are not participating.

Important Aspects of Research Efforts at a Private Research Organization

The previous paragraphs have described some of the projects relating to education and aging that have been conducted at AIR. In this section, four aspects of research will be discussed as they relate to work being undertaken at a research organization such as AIR. Examples drawn from current research will be used to illustrate the major points of the discussion.

Major research objectives. A primary dimension concerns the degree of flexibility with which the researcher can set the objectives. Related to this flexibility is the ability to set and implement long-term objectives. Persons working at a research firm like AIR possess a great deal of flexibility, provided they can obtain the necessary funding for their work.

TABLE 5

Frequencies and Percentages by Age of the U.S. Population and the
ABE Target and Demand Populations

1970 U.S. Population			1969								1972							
			ABE Target Population				ABE Demand Population				ABE Target Population				ABE Demand Population			
			Definition #1 (8th Grade)		Definition #2 (12th Grade)		Definition #1 (8th Grade)		Definition #2 (12th Grade)		Definition #1 (8th Grade)		Definition #2 (12th Grade)		Definition #1 (8th Grade)		Definition #2 (12th Grade)	
Age	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
14-19	23,165,707	15.5	293,700	15.4	1,846,700	24.9	2,300	4.6	24,500	5.2	3,083,500	17.1	1,994,400	26.9	3,000	6.5	44,600	7.9
20-24	16,371,021	11.0	43,800	2.3	391,900	5.3	3,000	5.9	65,900	14.0	439,200	2.4	301,900	5.3	3,300	7.2	91,700	16.2
25-34	24,907,429	16.7	113,100	5.9	793,800	10.7	7,900	15.9	140,500	29.8	1,150,300	6.4	723,900	9.8	6,800	14.8	157,000	27.7
35-44	23,087,805	15.5	209,600	11.0	978,100	13.2	12,700	25.4	110,400	23.4	1,804,900	10.0	852,500	11.5	8,000	17.5	117,800	20.8
45-59	33,192,985	22.2	460,000	24.1	1,598,700	21.5	17,000	34.0	105,400	22.4	3,864,400	21.4	1,562,700	21.1	15,000	32.6	119,400	21.1
60+	28,682,286	19.2	787,100	41.3	1,821,500	24.5	7,000	14.1	24,100	5.1	7,728,600	42.8	1,895,300	25.5	9,800	21.4	36,000	6.4

Thus, in the case of the quality of life research, it was necessary for AIR to fund the initial definitional studies before it was possible to secure federal grants for the interview work. Such flexibility in developing research objectives also presumably exists in a university setting. Of course, some would argue that "every academic department of a university has its own preoccupation" (Shanner, 1952) and this atmosphere affects the work of the faculty members. In contrast, researchers affiliated with governmental agencies or with private industries or businesses can experience much less freedom in their work. Thus, the concerns of the legislature or of the management provide the major impetus for one's work.

The linkage between the research objectives and future policy decisions provides another important dimension. Because research objectives arise directly from government or industry needs, they can have an immediate impact on policy decisions. In many cases, the research undertaken by an organization such as AIR results in response to the expressed needs of government agencies or private industry. Such research may be directly focused on certain policy decisions. For example, the SAGE staff at AIR are attempting to provide data analyses that will assist government agency personnel in developing or modifying programs. The research conducted at a university, as a result of the flexibility provided to the faculty, is much less likely to be directly applicable or relevant to future policy decisions.

Methodology. Differences in methodology among researchers in the various settings result from differences in research objectives and in the character of the research. Moving from the university to the private research institute to the legislative and private industry settings, the research becomes more applied. As a consequence, the research designs used in applied situations may be less rigorous than those used in basic research, with a tradeoff occurring between internal and external validity. In particular, less research takes place in the "laboratory," and more takes place in natural settings (with fewer controls over the treatment). For example, the selection of the programs to implement in terms of adult guidance resulted from the recommendations of a task force representing the community. The evaluation was based on the selected programs and was focused on persons who entered those programs. This cannot be considered

an extremely "rigorous" research design; on the other hand, it provided a community service and it facilitated the answering of certain questions regarding the programs.

Limitations. Certain problems face the researcher at a private institution that may be less likely in other settings. At present, there appears to be a lack of training for this kind of position. Traditional academic training prepares the researcher for work in a university setting. Thus, the graduate student receives extensive training in designing well-controlled laboratory experiments. Unfortunately, these are rarely used in the kinds of research conducted in the development or evaluation of a government or industry program. Upon entering the nonacademic research world, it becomes apparent very quickly that certain business management skills, such as budgeting and accounting, scheduling, and personnel management, are critical. In many cases, these skills must be acquired on the job.

Degree of security in research support is another problem area for the researcher in an organization such as AIR. Although stable funding is needed for long-term efforts, such stability may not be possible at a private research firm. In the case of the quality of life studies, support was never obtained for the entire research program; instead, individual studies from different funding agencies received support.

Advantages. Although problems do exist, there are many advantages to working in private research. Because the researcher is not labeled as being affiliated with one specific discipline, he or she is easily able to move into new areas. Given that discipline and subject-matter boundaries are unimportant, multidisciplinary efforts occur as the norm. In addition, there is a high degree of colleague interaction and collaboration. The SAGE project, for example, includes researchers with backgrounds in education, psychology, sociology, statistics, and computer science. Teams of researchers from both the Palo Alto and Washington offices work closely on specific problems.

References

- Bellenger, J., Beck, H., Harrison, L., & Sanderson, B. Career guidance for adults: Focus on women and minorities. Two program models--Implementation and Evaluation. Palo Alto, CA: American Institutes for Research, 1976.
- Boaz, R. Participation in adult education: Final report, 1975. Washington, DC: U.S. Government Printing Office, 1978.
- Campbell, A., Converse, P., & Rodgers, W. The quality of American life: Perceptions, evaluations, and satisfactions. New York: Russell Sage Foundation, 1976.
- Flanagan, J. The critical incident technique. Psychological Bulletin, 1954, 51, 327-358.
- Flanagan, J., & Russ-Eft, D. Empirical study to aid in formulating educational goals. Palo Alto, CA: American Institutes for Research, 1975.
- Flanagan, J., & Russ-Eft, D. Identifying opportunities for improving the quality of life of older Americans. Palo Alto, CA: American Institutes for Research, 1978.
- Goals for Americans: The report of the President's Commission on National Goals. Englewood Cliffs, NJ: Prentice-Hall, 1960.
- Harrison, L. Career guidance for adults: Focus on women and minorities: A planning manual and catalog of programs. Palo Alto, CA: American Institutes for Research, 1976.
- Okes, J. Participation in adult education: Final report, 1969. Washington, DC: U.S. Government Printing Office, 1974.
- Okes, J. Participation in adult education: Final report, 1972. Washington, DC: U.S. Government Printing Office, 1976.
- Organization for Economic Cooperation and Development list of social concerns common to most OECD countries. Paris, France: OECD, Social Indicator Development Programme, Manpower and Social Affairs Directorate, 1973.
- Russ-Eft, D., Rubin, D., & Holmen, R. Identification of issues in adult education. New York: Garland Publishing Co., in press.